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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,768	01/30/2001	Naoki Kuwata	Q62125	4964
7590 12/22/2003			EXAMINER	
Sughrue Mion Zinn Macpeak & Seas 2100 Pennsylvania Avenue NW Washington, DC 20037-3202			SELBY, GEVELL V	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,768

Applicant(s)

KUWATA ET AL.

Examiner

Gevell Selby

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because:

The abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

2. Claim 6 is objected to because of the following informalities:

The preamble of the claims states, "A monotone conversion method picture" the word "picture" must be deleted because the method is what is being claimed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 4, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The term "more detailed than" in claim 4 is a relative term which renders the claim indefinite. The term "more detailed than" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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Claim 4 uses the relative term "more detailed than" to compare two ranges, but is not clear in what way the range is more detailed. The range could be detailed in a number of ways such as being smaller, larger or of greater accuracy. For review purposes of the rest of this application, the term "more detailed than" will be replaced with "more accurate than".

In regard to claims dependent claim 8, the independent claims that claim 8 incorporates claim a method, as opposed to the apparatus claimed by 8. The independent claim incorporated into claim 9 claims an apparatus wherein claim 9 claims a method. A claim which simultaneously claims both statutory classes is indefinite under 122/2d (In Ex Parte Lyell 17 USPQ2d 1548 (Bd.PA&I 19990).

In order to complete the examination of claims 8 and 9, claim 8 will only be dependent of claim 7 and the term "unit" will be replaced with "step"; and the term "method" in claim 9 will be replaced with "apparatus".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1 - 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shalit, US 4,939,581.**

In regard to claim 1, Shalit, US 4,939,581, discloses a monotone conversion apparatus (see figure 3) characterized in that "it is provided with a picture acquisition unit (see figure 3, element 24) for expressing a picture in picture elements in a dot matrix form and acquiring picture data representing each picture element in gradation of prescribed element colors into which an original color is separated (see column 4, lines 10-18);

a luminance distribution totaling unit (see figure 3, element 38) for totaling the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 45+);

a luminance correspondence setting unit (see figure 3, element 30) for setting a correspondence relationship for collective accomplishment of a conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

a picture data conversion unit (see figure 3, element 30) for generating monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17)."

In regard to claim 2, Shalit, US 4,939,581, discloses a monotone conversion apparatus, asset forth in claim 1, characterized in that "said luminance correspondence setting unit, in adjusting relative proportions among element colors to prescribed values

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(see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve.”

The description is inherent to the luminance correspondence setting unit because it describes a characteristic of an adjusted unit.

In regard to claim 3, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 1 or 2, characterized in that “said luminance correspondence setting unit generates a plurality of conversion tables (see figure 3, elements 31 and 32) matching individual ones of said correspondence relationships, and generates an integrated conversion table to integrate these conversion tables (see column 7, line 55 to column 8, line 2).”

In regard to claim 4, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 3, characterized in that “said luminance correspondence setting unit causes conversion tables matching said individual correspondence relationships to have tone ranges more detailed (accurate) than the tone range of said integrated conversion table (see columns 8-9, table).”

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 5, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 1 or 2, characterized in that “said luminance correspondence setting unit said correspondence relationships on the basis of the result of

successive execution of computations representing the individual correspondence relationships (see column 9, lines 25-47).”

The luminance correspondence setting unit uses a series a computations to compute the ideal density and ideal pixel values used in the table for comparisons.

In regard to claim 6, Shalit, US 4,939,581, discloses a monotone conversion method ~~picture~~ characterized in that “it is provided with a picture acquisition step to express a picture in picture elements in a dot matrix form and acquire picture data representing each picture element in gradation of prescribed element colors into which an original color is separated (see column 4, lines 52-59);

a luminance distribution totaling step to total the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 45+);

a correspondence setting step to set a correspondence relationship for collective accomplishment of conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

a picture data conversion step to generate monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17).”

In regard to claim 7, Shalit, US 4,939,581, discloses a monotone conversion ~~apparatus~~ (method), asset forth in claim 6, characterized in that “said luminance

correspondence setting ~~unit~~-(step), in adjusting relative proportions among element colors to prescribed values (see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve.”

The description is inherent to the luminance correspondence setting unit because it describes a characteristic of an adjusted unit.

In regard to claim 8, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claims 6 ~~or~~ 7, characterized in that “said luminance correspondence setting ~~unit~~ (step) generates a plurality of conversion tables (see figure 3, elements 31 and 32) matching individual ones of said correspondence relationships, and generates an integrated conversion table to integrate these conversion tables (see column 7, line 55 to column 8, line 2 also see column 8-9, Table).”

In regard to claim 9, Shalit, US 4,939,581, discloses a monotone conversion method (apparatus), as set forth in claim 8, characterized in that “at said correspondence setting step conversion tables matching said individual correspondence relationships have tone ranges more ~~detailed~~ (accurate) than the tone range of said integrated conversion table (see column 8-9, Table).”

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 10, Shalit, US 4,939,581, discloses a monotone conversion method, as set forth in claim 6 or 7, characterized in that “at said correspondence setting

step said correspondence relationships are set on the basis of the result of successive execution of computations representing the individual correspondence relationships (see column 9, lines 24-47).”

The luminance correspondence setting unit uses a series a computations to compute the ideal density and ideal pixel values used in the table for comparisons.

In regard to claim 11, Shalit, US 4,939,581, discloses a medium recording (see figure 3, element 39) “thereon a monotone conversion program for causing a computer to express a picture in picture elements in a dot matrix form, acquire picture data representing each picture element in gradation of prescribed element colors into which an original color is separated, and thereby generate monotone picture data, said monotone conversion program being characterized in that it is provided with (see column 4, 55-59):

a luminance distribution totaling step to total the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 56 to column 8, lines 2);

a luminance correspondence setting step to set a correspondence relationship for collective accomplishment of conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

a picture data conversion step to generate monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17).”

In regard to claim 12, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in claim 11, "said monotone conversion program being characterized in that at said luminance correspondence setting step, in adjusting relative proportions among element colors to prescribed values (see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve."

The description is inherent to the luminance correspondence setting unit because it describes a characteristic of an adjusted unit.

In regard to claim 13, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 11 or 12, "said monotone conversion program being characterized in that at said luminance correspondence setting step a plurality of conversion tables (see figure 3, element 31 and 32) matching individual ones of said correspondence relationships are generated, and an integrated conversion table to integrate these conversion tables is generated see column 7, line 55 to column 8, line 2)."

In regard to claim 14, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 13, "said monotone conversion program being characterized in that at said luminance correspondence setting step conversion tables matching said individual correspondence relationships have tone ranges more detailed (accurate) than the tone range of said integrated conversion table (see column 8-9, Table)."

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 15, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 11 or 12, said monotone conversion program being characterized in that at said luminance correspondence setting step said correspondence relationships are set on the basis of the result of successive execution of computations representing the individual correspondence relationships (see column 9, lines 24-47).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses camera systems with image processing apparatuses:

Shiota, US 4,794,460,

Shiota, US 4,930, 009,

Haendle et al., US 4,926,454.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Vu Le can be reached on 703-308-6613. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

gvs


VU LE
PRIMARY EXAMINER